Fosgate Signature

Phono Stage Preamplifier

Owner's Manual

Musical Surroundings

FOSGATE
RESEARCH LLC

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Read This First

Please read carefully the following safety instructions, which have been included in compliance with international safety regulations.

- Read this instruction manual prior to connecting and operating this unit. Retain this manual for future reference.
- Retain all packing materials and carton for future need.
- To prevent fire or shock hazard, do not expose this unit to rain or moisture or operate in these conditions.
- This unit contains voltages that can cause serious injury or death. Do not remove the bottom cover at any time.
- To avoid risk of burns, do not touch vacuum tubes when the unit is powered on or within 30 minutes of powering down.
- No user serviceable parts are inside. Service should only be performed by Musical Surroundings or our authorized repair agents.
- In case of fuse replacement (located in IEC receptacle), disconnect AC cord prior to replacement and replace ONLY with fuse of identical type and rating.
- Never place any object or material over this unit, restricting ventilation, to avoid risk of fire.

Introduction

- The design is the result of more then 100 different hand built preamp circuits dating back to the 1970s.
- All amplification is accomplished with the SRPP (push pull) configuration for the best possible linearity, lowest noise and distortion.
- No solid-state devices are placed in the signal path and a tube is used for the high voltage rectifier.
- The power supply is very different and contributes to the high performance. There are no regulated power supplies. Each tube stage is powered by a separate storage capacitor that acts like a battery. These storage capacitors are very large (10 to 20 time's oversize). The power supply simply holds the voltage across the capacitors like a "trickle charger". PC board layout is "Dual Mono". The channels are located on opposite sides of the circuit board in near mirror image with dual triodes in a row down the center.
- The first stage has no NFB to interact with the cartridge. The second and third stages are enclosed in a single feedback loop incorporating both positive and negative feedback.
- The RIAA network is divided into two sections, one passive and one active. The upper half (above 1KZ) is accomplished with a passive network between stage one and two. The lower half (below 1KZ) is accomplished with an active network around stage two and three.

Unpacking

Opening the cartons: Use caution when opening the cartons with a sharp edged tool not to damage any of the contents.

Included with your Fosgate Signature phono stage is a pair of white gloves for handling both the unit as well as the tubes. This will avoid any finger oil from getting on the tubes that could cause irregular heating of the glass.

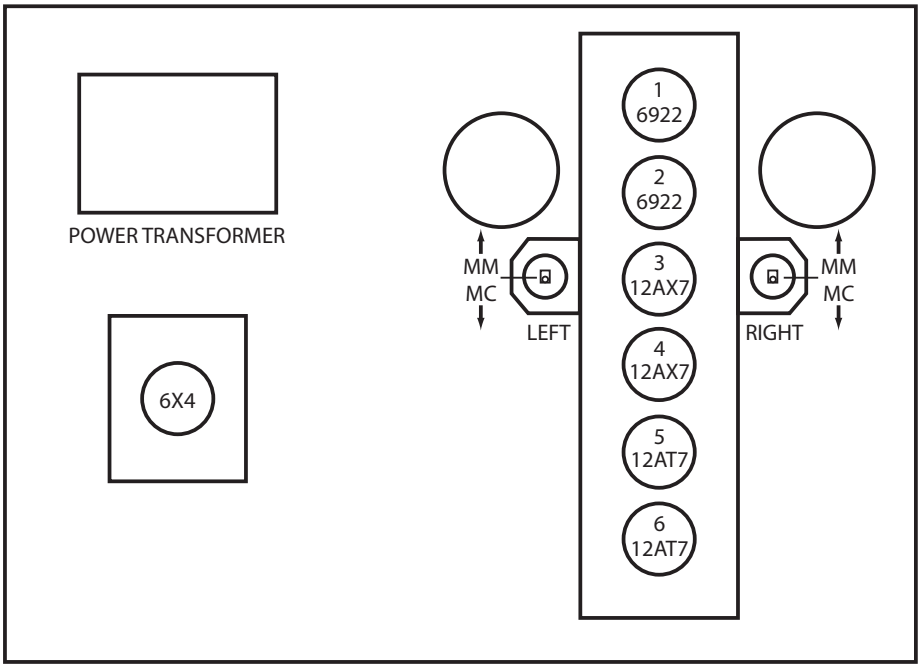
Foam packing: When you open the inner carton, you will see a layer of foam covering the phono stage. There are cut outs in the foam containing each vacuum tube, located in the appropriate position. Be careful when lifting the foam so that the tubes do not fall out. Alternately, you can remove the tubes from the foam before removing the foam itself. Please note the location and marking for each tube. Refer to the next page for specifics on tube installation.

Tube and tube shield installation

Tube compliment:

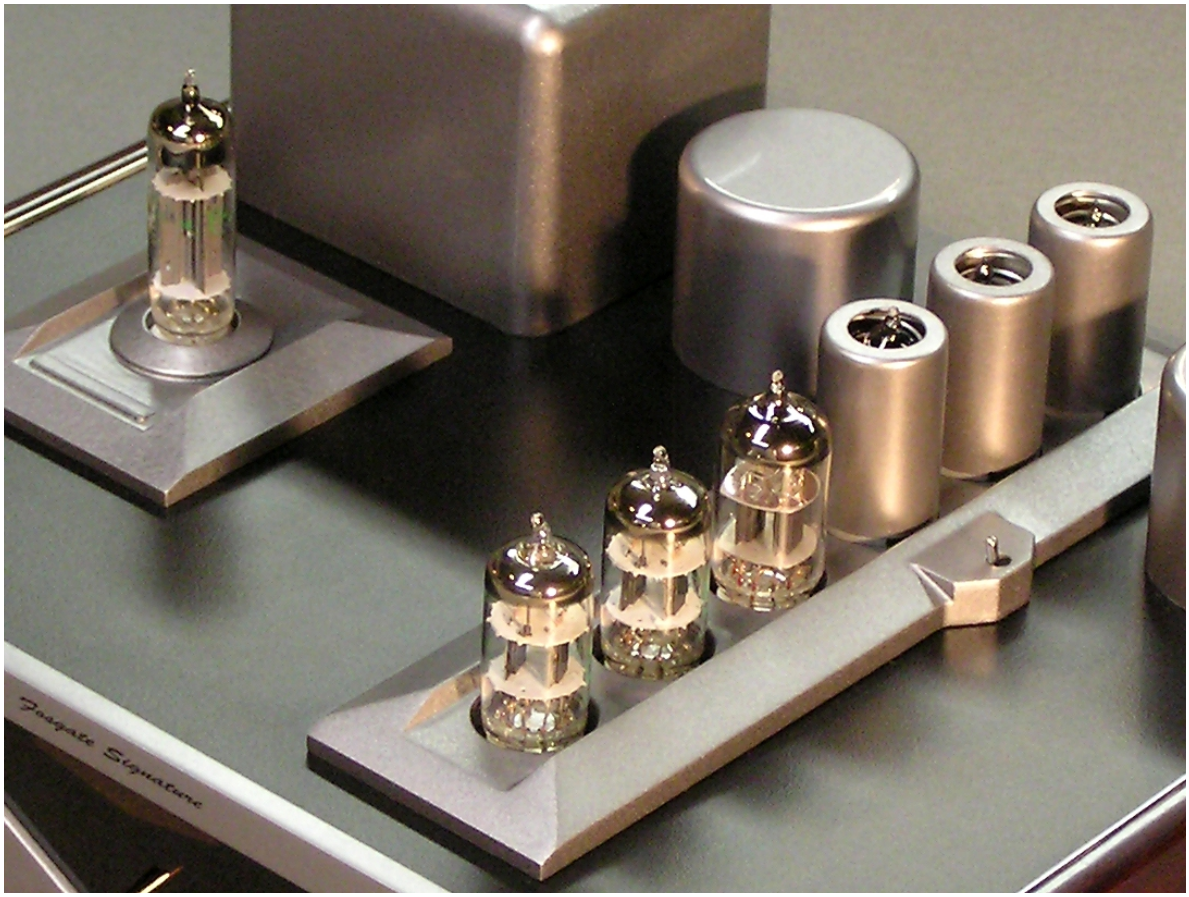
2 6DJ8's - V1 and V2
2 12AX7 - V3 and V4
2 12AT7 - V5 and V6
1 6X4 - high voltage rectifier

Install the tubes: When inserting tubes into their sockets, be very careful not to bend the metal pins. Begin by installing the tall 6X4 rectifier tube into the socket just in front of the power transformer housing. Continue installing the other six tubes by first inserting two 6DJ8's in the two sockets nearest the rear of the chassis, V1 and V2. Next, insert two 12AX7's in the middle two sockets, V3 and V4. And finally, install two 12AT7's in the remaining sockets nearest the front panel, V5 and V6.



FRONT OF UNIT

Install the tube shields: The three silver tube shields provided are vitally important in keeping noise away from the three most rear tubes, V1, V2 and V3. There is a gap around those three tube sockets, and down in each of those gaps are two metal pins that the tube shields lock on to. Note the locking-slots at the bottom of the tube shields. The unit should be powered off with AC cable disconnected.



Align those slots over the pins and carefully insert the tube shields over the three tubes. There are springs inside the top of the shields therefore you will need to push down until you feel the shields hit bottom, then twist them in a clockwise direction to lock the shields onto the pins. Adjust the tubes and shields to stand up straight.

Placement of the preamp:

The Fosgate Signature phono stage should be placed close to the turntable in order to use as short as possible phono cables between the tonearm and the unit. Position the phono stage away from hum producing sources such as motors, transformers and power cords. Good ventilation is essential for safety and the life of the phono stage. Allow at least 2” of clearance above the unit, and avoid placement on a shelf directly above a heat and noise source such as a power amplifier. Ideally, the shelf should be constructed of non-resonant material to minimize microphonics.

Audio Connections: Before connecting to your line-stage preamp or integrated amp, make sure the volume control of that unit is completely turned down. Connect your turntable to the left and right “INPUTS” of the phono stage, then secure the turntable ground wire to the grounding post provided on the back panel. Next, connect a pair of cables to the left and right “OUTPUTS” of the phono stage. The other ends of these cables connect to line level inputs or “AUX” type inputs of a line-stage preamp or integrated amp. *Do NOT connect these cables to inputs marked “PHONO” as these typically have circuitry redundant and inferior to your Fosgate Signature phono stage! (Please consult your owner’s manual of line stage or integrated to verify as some units may label a standard line level input as “phono” for convenience). The output impedance of your Fosgate Signature is low enough to drive solid state preamps down to a 10K input impedance. This is accomplished without a cathode follower or solid-state buffer in the output to affect the sound.

Power Cord Connections: Your Fosgate Signature phono stage is fitted with a male IEC AC input connector and supplied with a high gauge IEC grounded power cord. With the phono stage power switch in the off (down) position, attach the female end of the power cord to the unit and the 3 prong AC plug to a suitable AC outlet. Due to the high performance of thus unit, you may prefer an after-market high quality AC cord. Consult your Musical Surroundings dealer in this regard. You may also need to use an AC “cheater plug” or ground lifter if you encounter a ground loop in your system.

Settings: Refer to the information sheet for your phono cartridge to determine the output voltage specification and the recommended cartridge resistive loading setting or range. A pair of gain switches are located at the base of the third tube from the back of the chassis (see picture page 6, right channel visible). Left and right channel gain switches provide a gain of 60dB (MC) or 42dB (MM). If you are using a Low Output Moving Coil cartridge with less than 1 millivolt output, position both switches forward (toward the face panel as in the photo on page 6). When using a High Output Moving Coil cartridge with more than 1 millivolt output, or, if you are using a Moving Magnet cartridge, place both switches in the rearward position.

Cartridge loading: Using the rotary knob on the back of the phono stage, select the recommended resistive load based on your cartridge specification sheet. The cartridge load knob provides loading from 50 ohms to 100k ohms. Typically, MC cartridge loading is a minimum of 10 times the internal impedance of the MC cartridge. High output MC cartridges and MM cartridges typically load at 47k ohms. The 100K position is used with MM cartridges when more high frequency response is desired providing a closer balance to a MC cartridge. Input capacitance is very low. You may change loading to listen to the sound difference but turn down your line stage or integrated amp volume control completely down prior to changing the loading setting.

Powering up: Make sure all connections are in place and your line stage or integrated amp volume control is completely turned down prior to powering up your phono stage. The blue lights come on 30 seconds after power up, indicating voltages have stabilized and listening can begin. The sound may improve after several minutes of warm up.

Tube Rolling: Your Fosgate Signature phono stage ships with an extra 12AT7 tube that can be used in place of the 12AX7 in position V3 to give a slightly more detailed top end. Final choice will depend on listener preference and audio system.

Do not change tubes when the unit is powered on. To avoid risk of burns, do not touch vacuum tubes when the unit is powered on or within 30 minutes of powering down.

Below is a list of equivalent tubes used in your Fosgate Signature phono stage if you wish to tube roll. Please check with your Musical Surroundings' dealer regarding availability of tubes for this purpose.

Please note that tubes obtained from an independent source that causes damage to your Fosgate Signature phono stage is not covered under the warranty.

V1 and V2 - 6DJ8/ ECC88
Equivalent: 6922/ E88CC, 7308

V3 and V4 - 12AX7/ ECC83
Equivalent: 7025, 5751

V5 and V6 - 12AT7/ ECC81
Equivalent: 6201

V7 - 6X4 - high voltage rectifier

SPECIFICATIONS

Gain: 42dB MM, 60dB MC

Loading: 100Ω, 300Ω, 500Ω, 1kΩ, 47kΩ, 100kΩ

Capacitance: 50pf

Tube compliment:
2 6DJ8's V1 and V2
2 12AX7 V3 and V4
2 12AT7 V5 and V6
1 6X4

Dimensions: 13 3/16" W x 10 3/4" D x 5 5/8" H

Weight: 10 lbs

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90 DAY LIMITED WARRANTY TERMS AND CONDITIONS
(2 Year optional extended service contract)

1. Musical Surroundings warrants the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions herein set forth, for a period of 90 days from the date of purchase by the original purchaser. If the purchaser registers the unit with Musical Surroundings by mailing in the warranty card, together with a copy of the bill of sale, within 14 days of the date of purchase, said purchaser will be registered for an extended service contract. The extended service contract extends the 90 days to a period of 2 years from the date of purchase by the original purchaser or no later than 3 years from the date of shipment to the authorized Musical Surroundings dealer, whichever comes first. Tubes carry a 90 day warranty only.

2. CONDITIONS - This warranty is subject to the following conditions and limitations. The warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with or modified by anyone other than Musical Surroundings or their authorized repair stations. To obtain warranty service, you must first contact Musical Surroundings at 510 547-5006 or info@musicalsurroundings.com to obtain a Return Authorization (RA) number. The product must be packed in its original carton and returned to Musical Surroundings or authorized repair station by the customer at his or her sole expense. A returned product must be accompanied by a written description of the defect and a photocopy of the original purchase receipt. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorized dealer and the purchase price. Musical Surroundings reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.

3. REMEDY - In the event the above product fails to meet the warranty, and the above conditions have been met, the purchaser's sole remedy under the limited warranty shall be to return the product to Musical Surroundings where the defect will be rectified without charge for parts or labor.

4. LIMITED TO ORIGINAL PURCHASER - This warranty is for the sole benefit of the original purchaser of the covered product and is NOT TRANSFERRABLE.

5. DURATION OF WARRANTY - This warranty expires 90 days after the date of original purchase. If Musical Surroundings receives the warranty registration card, this period is extended to the second anniversary of the date of purchase or no later that the third anniversary of the shipment to the authorized Musical Surroundings dealer, whichever comes first.

6. MISCELLANEOUS - ANY IMPLIED WARRANTIES RELATING TO THE ABOVE PRODUCT SHALL BE LIMITED TO THE DURATION OF THIS WARRANTY. THE WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO THE PURCHASER. Some states do not allow limitations on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

7. WARRANTY OUTSIDE THE USA - Musical Surroundings has formal distribution in many of the countries of the free world, in each country the Musical Surroundings importer has contractually accepted the responsibility for product warranty. Warranty should normally be obtained from the importing dealer or distributor from whom you obtain your product.